

WHAT IS CLAIMED:

1. An evaporated fuel treatment device for internal combustion engine that uses a canister to absorb evaporated fuel generated in a fuel tank for evaporated fuel treatment purposes, said device comprising:

a sealing valve for controlling the continuity between said fuel tank and said canister;

a differential pressure detection means for detecting the difference between a canister side pressure which exists in a canister side area of the sealing valve and a tank internal pressure; and

an open failure normality judgment means for judging that no open failure exists in said sealing valve when said differential pressure detection means detects a differential pressure higher than a judgment value.

2. An evaporated fuel treatment device for internal combustion engine that uses a canister to absorb evaporated fuel generated in a fuel tank for evaporated fuel treatment purposes, said device comprising:

a sealing valve for controlling the continuity between said fuel tank and said canister;

a differential pressure generation condition judgment means for judging whether a differential pressure generation condition is established, said condition being established when the sealing valve is expected to be closed and differential pressure is expected to be generated between both sides of the sealing valve;

a condition establishment differential pressure detection means for detecting the difference between a canister side pressure and a tank internal pressure when said differential pressure generation condition is established; and

an open failure abnormality judgment means for judging that an open failure exists in said sealing valve when said condition establishment differential pressure detection means does not detect a differential pressure greater than a judgment value.

3. The evaporated fuel treatment device for internal combustion engine according to claim 2, wherein said differential pressure generation condition judgment means makes a judgment that said differential pressure generation condition is established when a predetermined period of time elapses after said sealing valve closes and the internal

combustion engine comes to a stop, said predetermined period of time being set as one necessary for generating significant change in said tank internal pressure.

4. The evaporated fuel treatment device for internal combustion engine according to claim 2, wherein said differential pressure generation condition judgment means makes a judgment that said differential pressure generation condition is established when a predetermined ambient temperature change occurs after said sealing valve closes and the internal combustion engine comes to a stop, said predetermined ambient temperature change being set as one necessary for generating significant change in said tank internal pressure.

5. The evaporated fuel treatment device for internal combustion engine according to claim 2, wherein said differential pressure generation condition judgment means makes a judgment that said differential pressure generation condition is established when a predetermined fuel temperature change occurs after said sealing valve closes and the internal combustion engine comes to a stop, said predetermined fuel temperature change being set as one necessary for generating significant change in said tank internal pressure.

6. The evaporated fuel treatment device for internal combustion engine according to claim 2, wherein said differential pressure generation condition judgment means makes a judgment that said differential pressure generation condition is established when the atmospheric pressure is significantly changed after said canister is relieved to atmosphere, said sealing valve closes, and the internal combustion engine comes to a stop.

7. The evaporated fuel treatment device for internal combustion engine according to claim 2, wherein said differential pressure generation condition judgment means makes a judgment that said differential pressure generation condition is established when a predetermined change occurs in the difference between a fuel temperature and the ambient temperature after said sealing valve closes with the internal combustion engine brought to a stop, said predetermined change being set as one necessary for generating significant change in said tank internal pressure.

8. An evaporated fuel treatment device for internal combustion engine that uses a canister to absorb evaporated fuel generated in a fuel tank for evaporated fuel treatment purposes, said device comprising:

a sealing valve for controlling the continuity between said fuel tank and said canister;

a close failure judgment means for judging whether a close failure exists in said sealing valve;

a pressure introduction means for introducing pressure into either said canister or said fuel tank in a situation where said sealing valve is closed;

a sealing valve open instruction generation means for issuing a valve open instruction to said sealing valve in a situation where pressure is introduced into either said canister or said fuel tank by said pressure introduction means;

a pressure change judgment means for conducting a check, before and after the issuance of said valve open instruction, to judge whether a significant pressure change occurs in said canister or said fuel tank to which pressure is not introduced; and

an open failure abnormality judgment means for making a judgment that an open failure exists in said sealing valve when said significant pressure change is not verified by said pressure change judgment means under a circumstance where no close failure record exists.